CLAIMS:

1.   A switching arrangement having:-

a cross-bar;

a plurality of ingress means connected to an input side of the cross-bar, each ingress means including an ingress schedule storing means;

a plurality of egress means connected to an output side of the cross-bar, each egress means including an egress schedule storing means; and

a management card which communicates configuration primitives to each of the plurality of ingress means and to each of the plurality of egress means, the configuration primitives providing updated entries for ingress and egress schedule storing means.

2.   An arrangement according to claim 1, wherein each ingress means includes means for storing a plurality of transmission queues for transmission across the cross-bar.

3.   An arrangement according to claim 2, wherein each ingress schedule storing means stores identities of said transmission queues, each transmission queue corresponding to a respective egress means identification number.

4.   An arrangement according to claim 3, wherein each ingress means maintains a pointer into each ingress schedule storing means for identifying the transmission queue to be transmitted.

5.   An arrangement according to any one of the preceding claims, wherein each egress schedule storing means stores identities of ingress means addresses from which data is to be received.

6.   An arrangement according to claim 5, wherein each egress means maintains a pointer into each egress schedule storing means for identifying an ingress means address from which data is to be received.

7.   A method of routing data using a switching arrangement according to any one of the preceding claims, the method comprising:-

a)   storing a plurality of transmission queue identities in each ingress schedule storing means;

b)   storing a plurality of ingress identities in each egress schedule storing means;

c)   managing the contents of each ingress schedule storing means and each egress schedule storing means by providing ingress pointer means to reference one of said stored plurality of transmission queue identities and egress pointer means to reference one of said stored plurality of ingress identities from which data is to be received; and

d)   at each cell transmit time, transmitting a cell from said referenced transmission queue in the ingress means and receiving the cell from said referenced ingress identity.

8.   A method according to claim 7, wherein step d) further comprises moving said ingress pointer and said egress pointer to the next location.

9. A method according to claim 8, wherein step d) further comprises, when each pointer has reached the last location, moving to the first location.

10. A method according to any one of claims 7 to 9, wherein step c) comprises, for each ingress means, calculating cross-bar rates required to each egress means.

11. A method according to claim 10, wherein said cross-bar rates are calculated according to current traffic load and quality of service required.

12. A method according to claim 10 or 11, wherein step c) further comprises calculating corresponding ingress and egress schedules which satisfy said calculated cross-bar rates.

13. A method according to claim 12, further comprising the step of updating the ingress and egress schedule storing means with update messages relating to the calculated ingress and egress schedules.